

APPROVED	O.G. FIG.	
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1 / 30

1042 127343 126343 127043 126043 127143 126143 127243 126243 127343 126343 127443 126443 127543 126543 127643 126643 127743 126743 127843 126843 127943 126943 128043 127043 128143 127143 128243 127243 128343 127343 128443 127443 128543 127543 128643 127643 128743 127743 128843 127843 128943 127943 129043 128043 129143 128143 129243 128243 129343 128343 129443 128443 129543 128543 129643 128643 129743 128743 129843 128843 129943 128943 130043 129043 130143 129143 130243 129243 130343 129343 130443 129443 130543 129543 130643 129643 130743 129743 130843 129843 130943 129943 131043 130043 131143 130143 131243 130243 131343 130343 131443 130443 131543 130543 131643 130643 131743 130743 131843 130843 131943 130943 132043 131043 132143 131143 132243 131243 132343 131343 132443 131443 132543 131543 132643 131643 132743 131743 132843 131843 132943 131943 133043 132043 133143 132143 133243 132243 133343 132343 133443 132443 133543 132543 133643 132643 133743 132743 133843 132843 133943 132943 134043 133043 134143 133143 134243 133243 134343 133343 134443 133443 134543 133543 134643 133643 134743 133743 134843 133843 134943 133943 135043 134043 135143 134143 135243 134243 135343 134343 135443 134443 135543 134543 135643 134643 135743 134743 135843 134843 135943 134943 136043 135043 136143 135143 136243 135243 136343 135343 136443 135443 136543 135543 136643 135643 136743 135743 136843 135843 136943 135943 137043 136043 137143 136143 137243 136243 137343 136343 137443 136443 137543 136543 137643 136643 137743 136743 137843 136843 137943 136943 138043 137043 138143 137143 138243 137243 138343 137343 138443 137443 138543 137543 138643 137643 138743 137743 138843 137843 138943 137943 139043 138043 139143 138143 139243 138243 139343 138343 139443 138443 139543 138543 139643 138643 139743 138743 139843 138843 139943 138943 140043 139043 140143 139143 140243 139243 140343 139343 140443 139443 140543 139543 140643 139643 140743 139743 140843 139843 140943 139943 141043 140043 141143 140143 141243 140243 141343 140343 141443 140443 141543 140543 141643 140643 141743 140743 141843 140843 141943 140943 142043 141043 142143 141143 142243 141243 142343 141343 142443 141443 142543 141543 142643 141643 142743 141743 142843 141843 142943 141943 143043 142043 143143 142143 143243 142243 143343 142343 143443 142443 143543 142543 143643 142643 143743 142743 143843 142843 143943 142943 144043 143043 144143 143143 144243 143243 144343 143343 144443 143443 144543 143543 144643 143643 144743 143743 144843 143843 144943 143943 145043 144043 145143 144143 145243 144243 145343 144343 145443 144443 145543 144543 145643 144643 145743 144743 145843 144843 145943 144943 146043 145043 146143 145143 146243 145243 146343 145343 146443 145443 146543 145543 146643 145643 146743 145743 146843 145843 146943 145943 147043 146043 147143 146143 147243 146243 147343 146343 147443 146443 147543 146543 147643 146643 147743 146743 147843 146843 147943 146943 148043 147043 148143 147143 148243 147243 148343 147343 148443 147443 148543 147543 148643 147643 148743 147743 148843 147843 148943 147943 149043 148043 149143 148143 149243 148243 149343 148343 149443 148443 149543 148543 149643 148643 149743 148743 149843 148843 149943 148943 150043 149043 150143 149143 150243 149243 150343 149343 150443 149443 150543 149543 150643 149643 150743 149743 150843 149843 150943 149943 151043 150043 151143 150143 151243 150243 151343 150343 151443 150443 151543 150543 151643 150643 151743 150743 151843 150843 151943 150943 152043 151043 152143 151143 152243 151243 152343 151343 152443 151443 152543 151543 152643 151643 152743 151743 152843 151843 152943 151943 153043 152043 153143 152143 153243 152243 153343 152343 153443 152443 153543 152543 153643 152643 153743 152743 153843 152843 153943 152943 154043 153043 154143 153143 154243 153243 154343 153343 154443 153443 154543 153543 154643 153643 154743 153743 154843 153843 154943 153943 155043 154043 155143 154143 155243 154243 155343 154343 155443 154443 155543 154543 155643 154643 155743 154743 155843 154843 155943 154943 156043 15504

**FIG. 1**

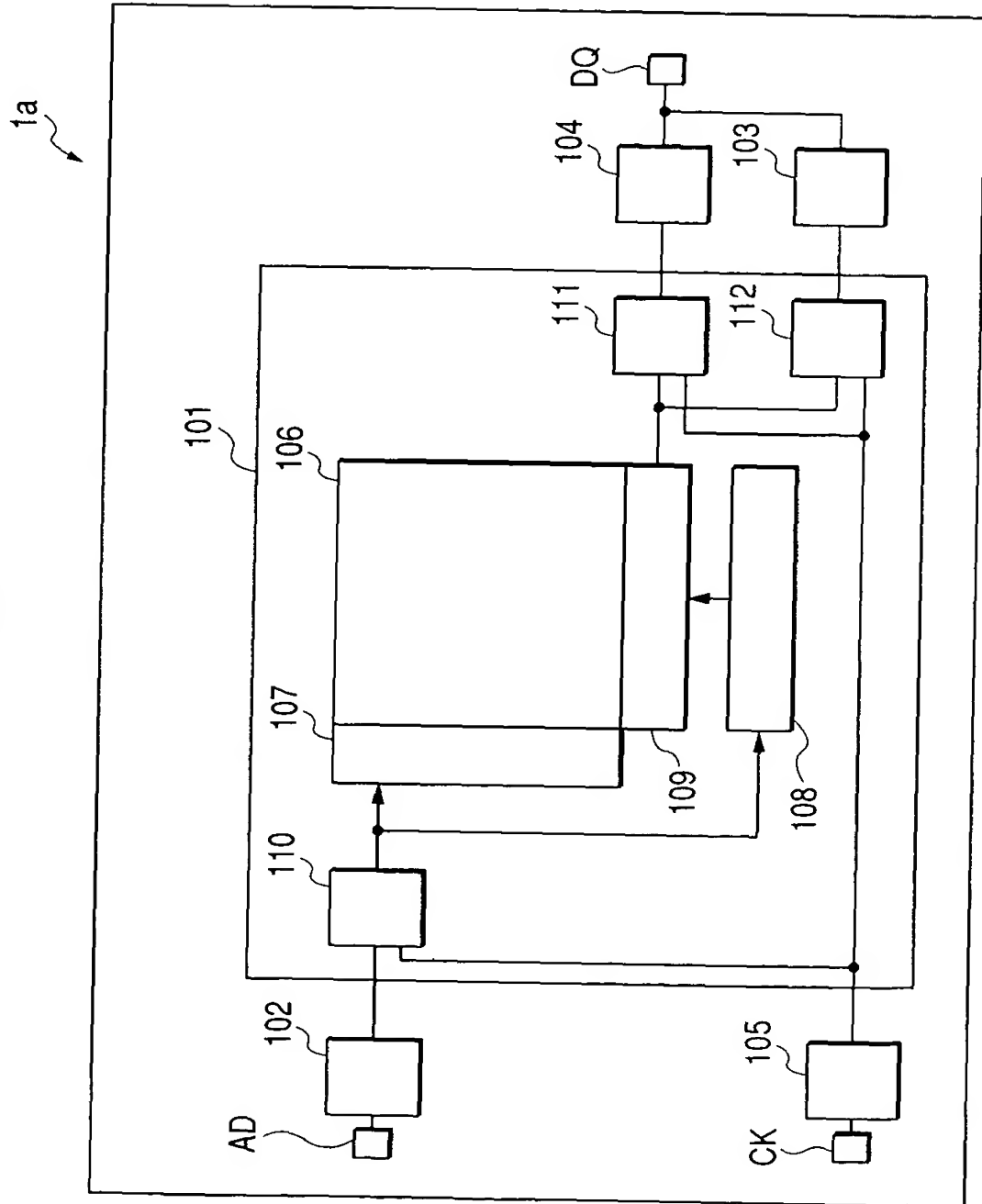
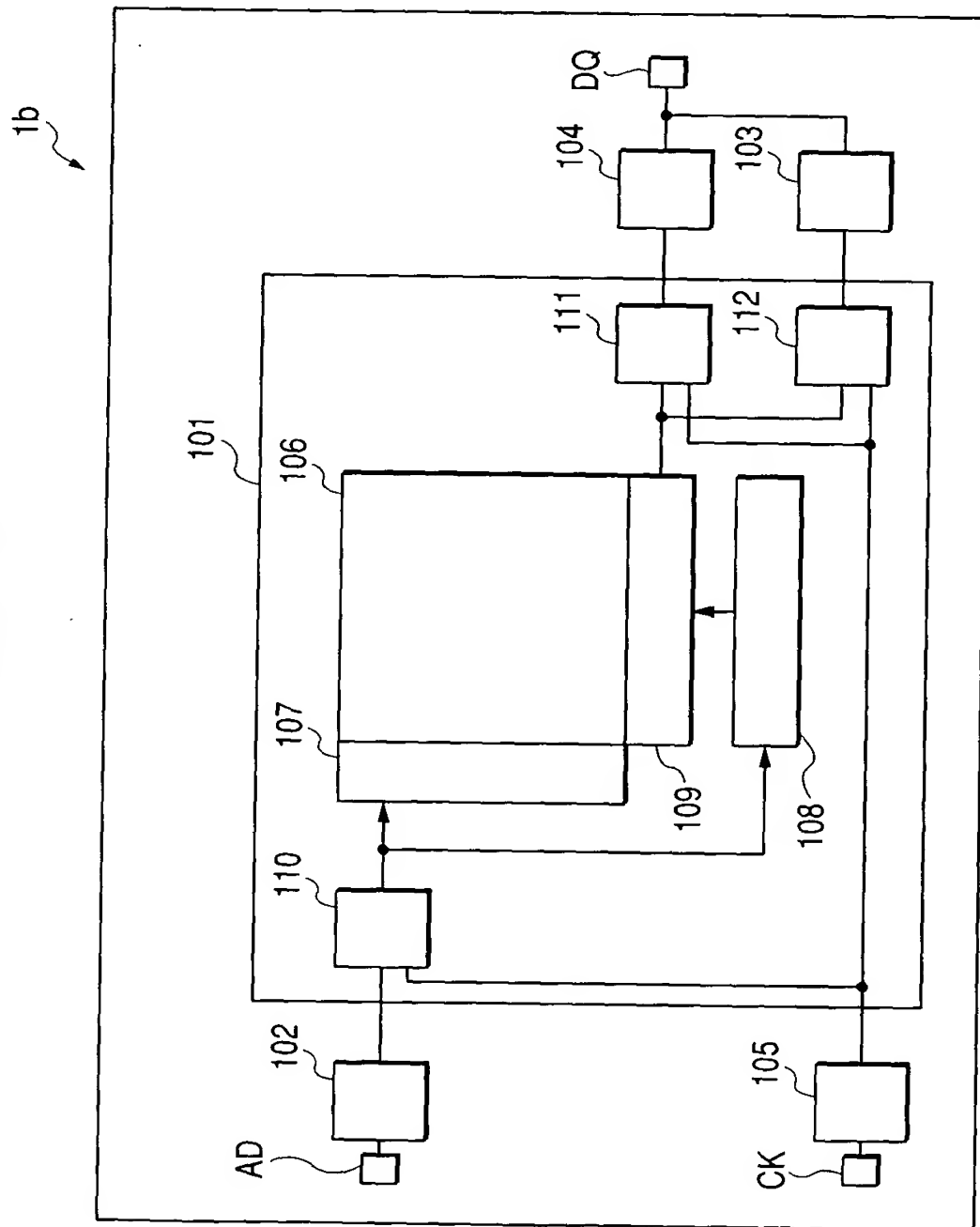


FIG. 2

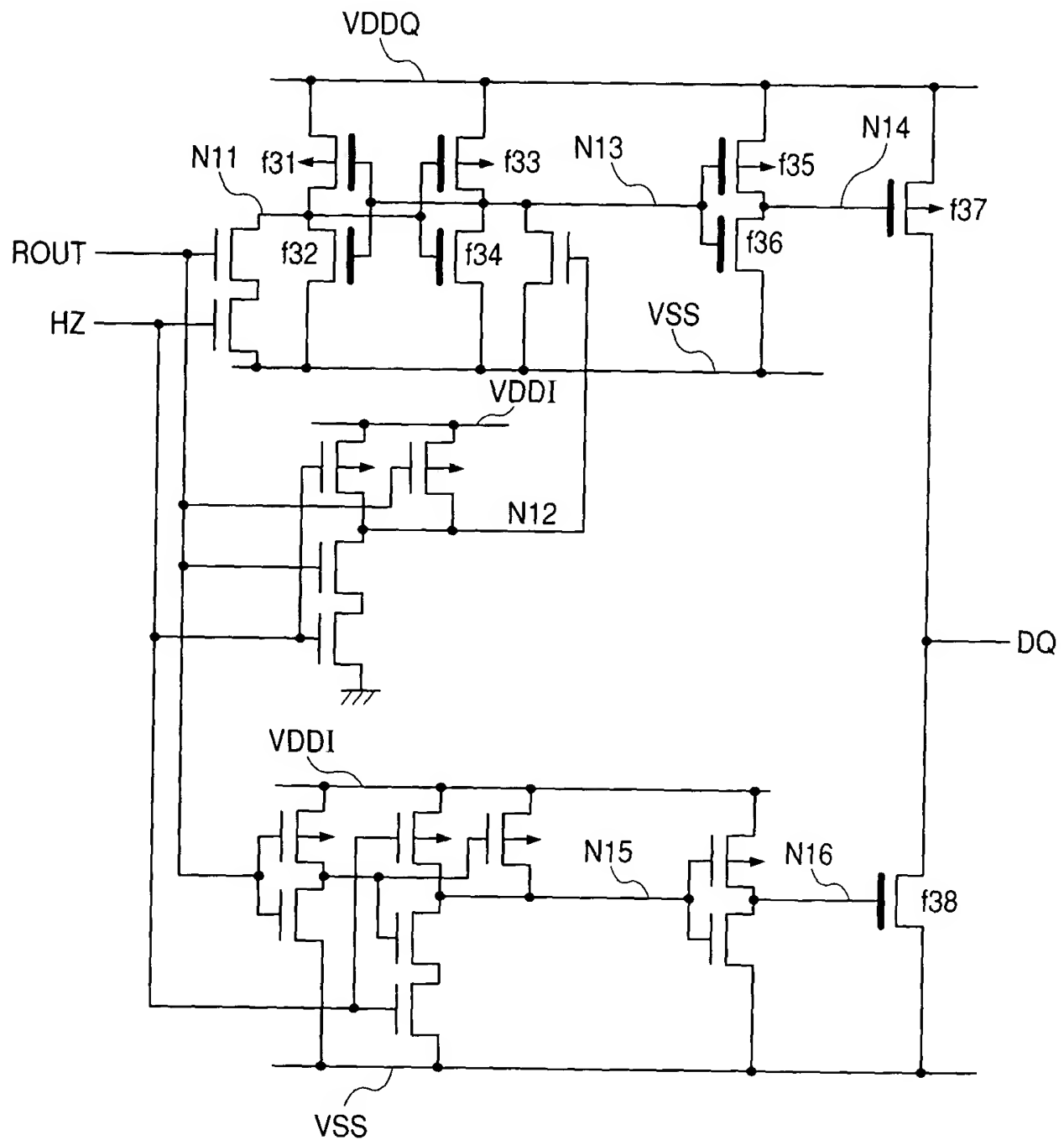
FIG. 2



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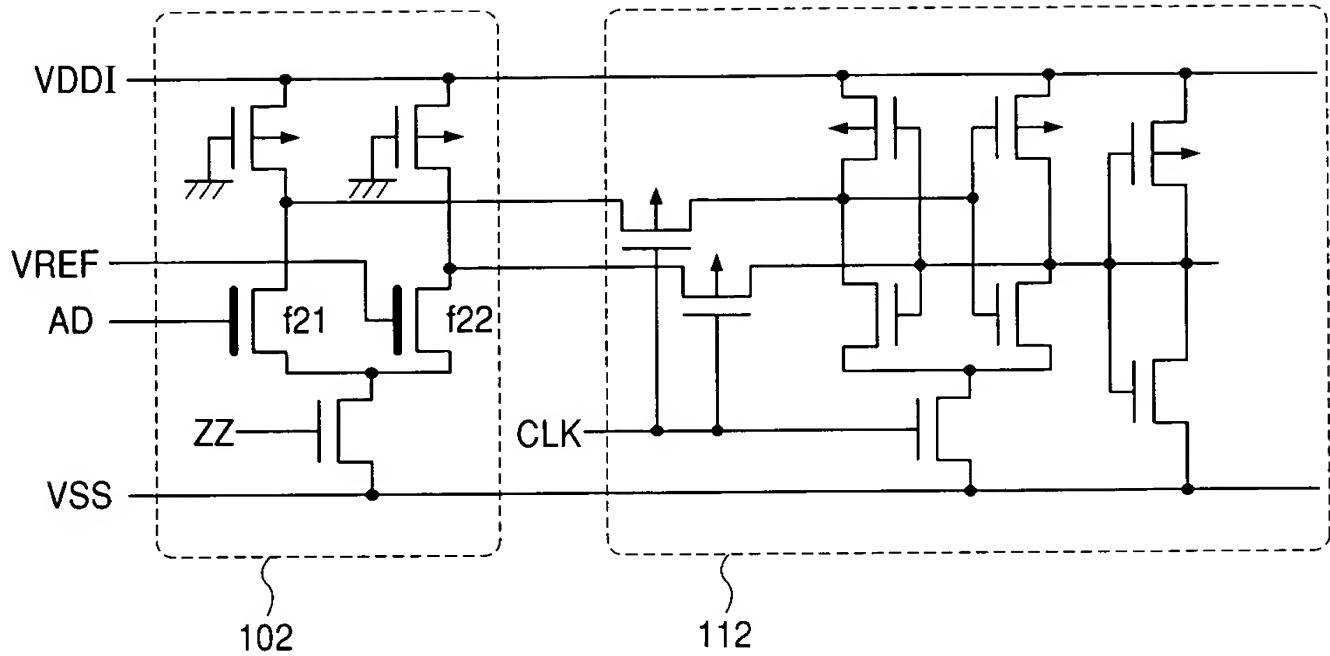
3 / 30

FIG. 3

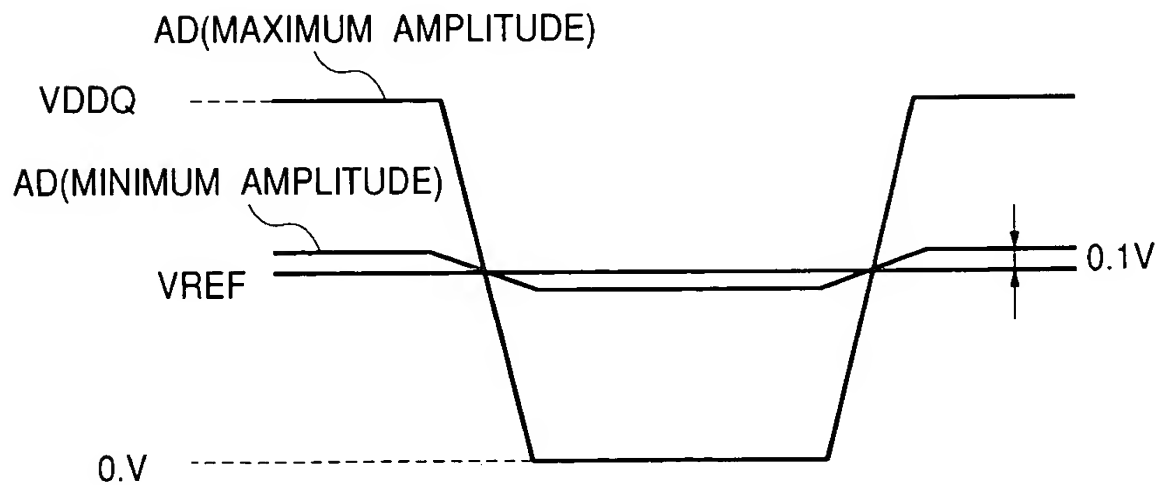




**FIG. 5**



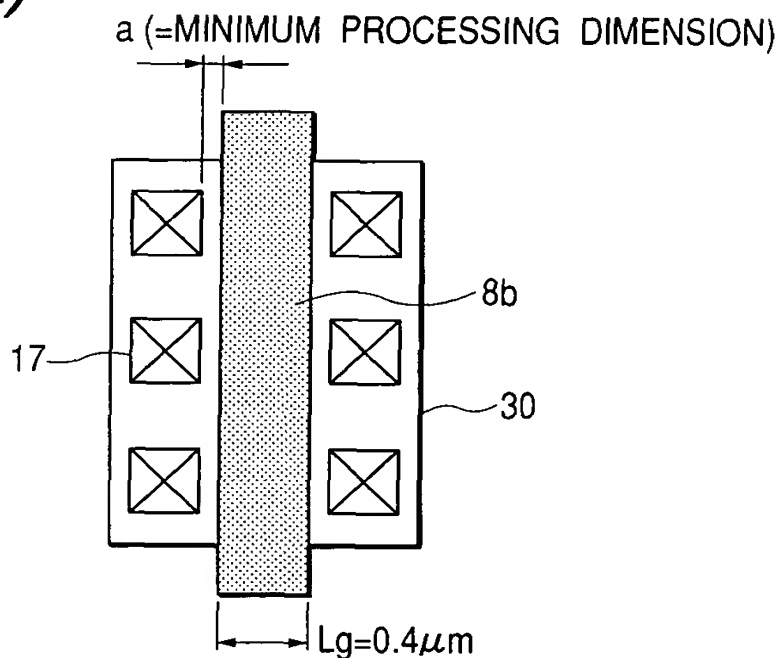
**FIG. 6**



APPROVED	O.G. FIG.	
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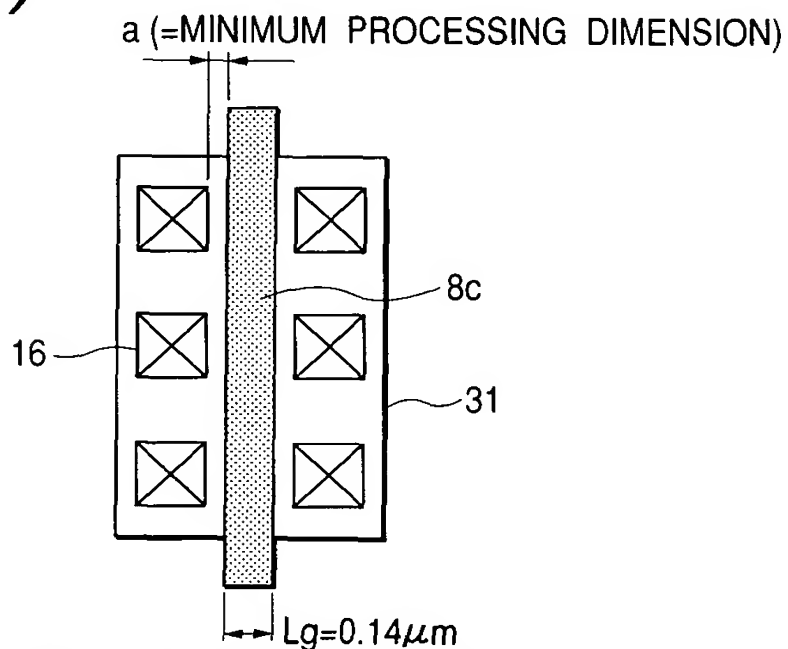
6 / 30

FIG. 7(a)



3.3V WITHSTANDING MOS TRANSISTOR

FIG. 7(b)



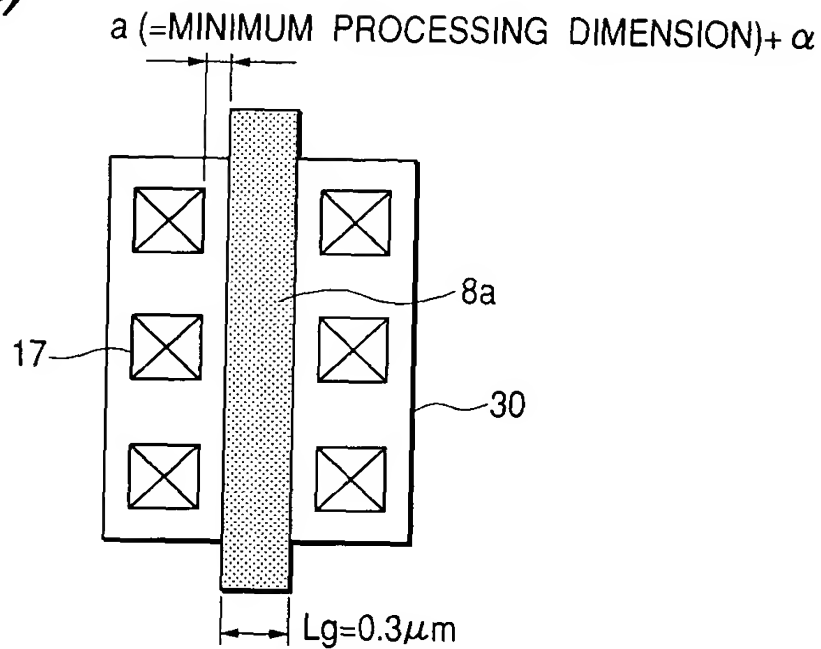
1.5V WITHSTANDING MOS TRANSISTOR

FIG. 7(a) 3.3V WITHSTANDING MOS TRANSISTOR

APPROVED	O.G. FIG.	
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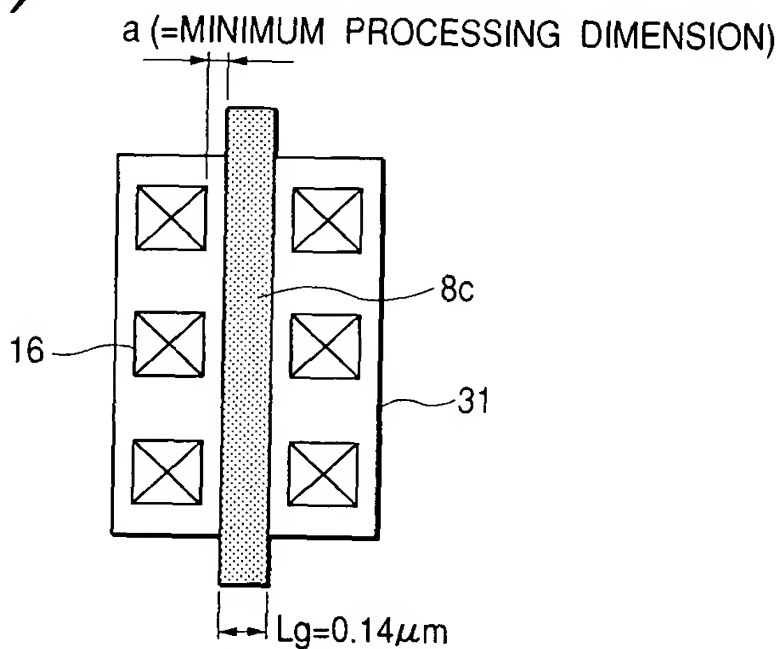
7 / 30

FIG. 8(a)



2.5V WITHSTANDING MOS TRANSISTOR

FIG. 8(b)



1.5V WITHSTANDING MOS TRANSISTOR

FIG. 8(a) 2.5V WITHSTANDING MOS TRANSISTOR

APPROVED	O.G. FIG.	
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8 / 30

TOP SHEET

FIG. 9

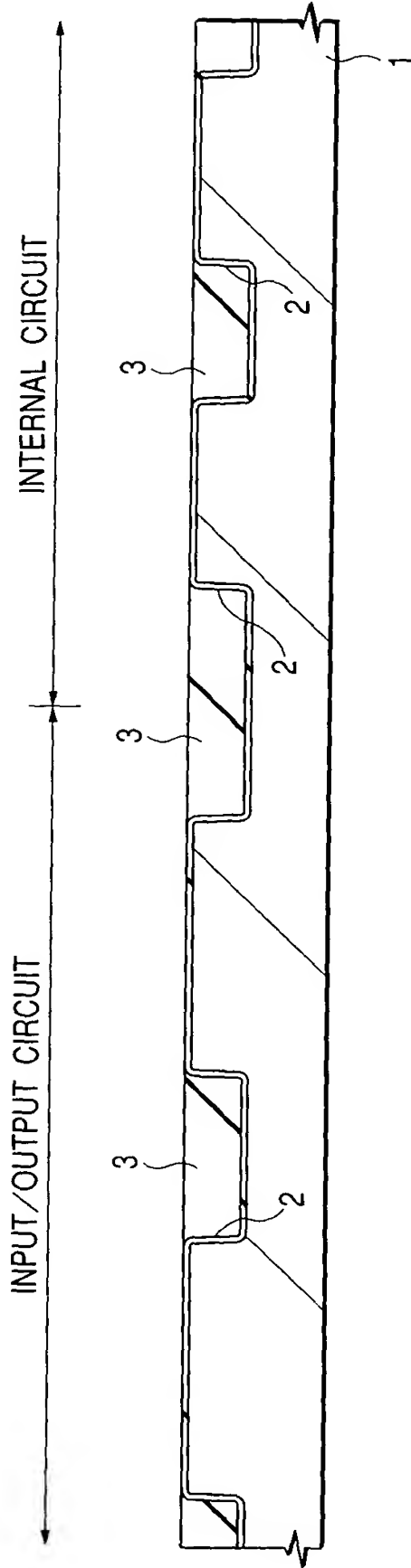
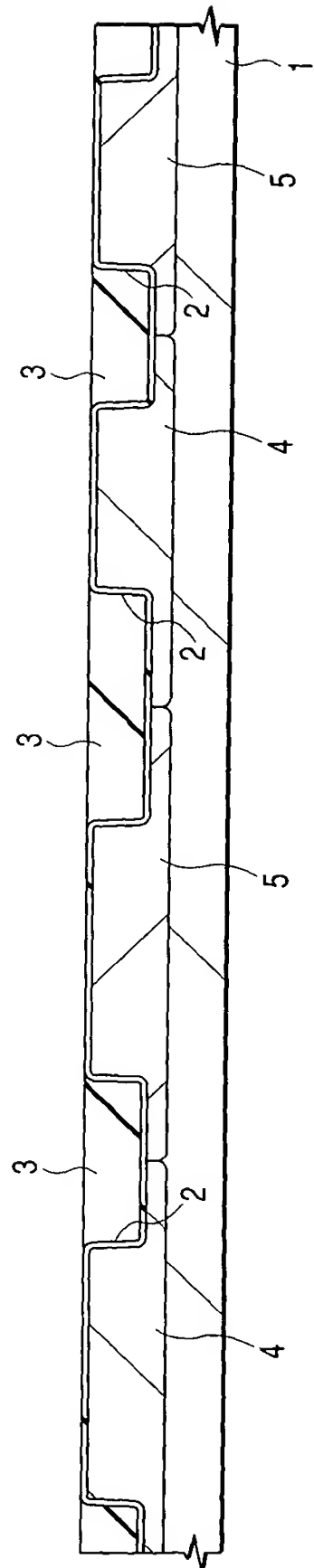


FIG. 10





APPROVED	O.G. FIG.
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9 / 30

FIG. 11(a)

FIG. 11(a)

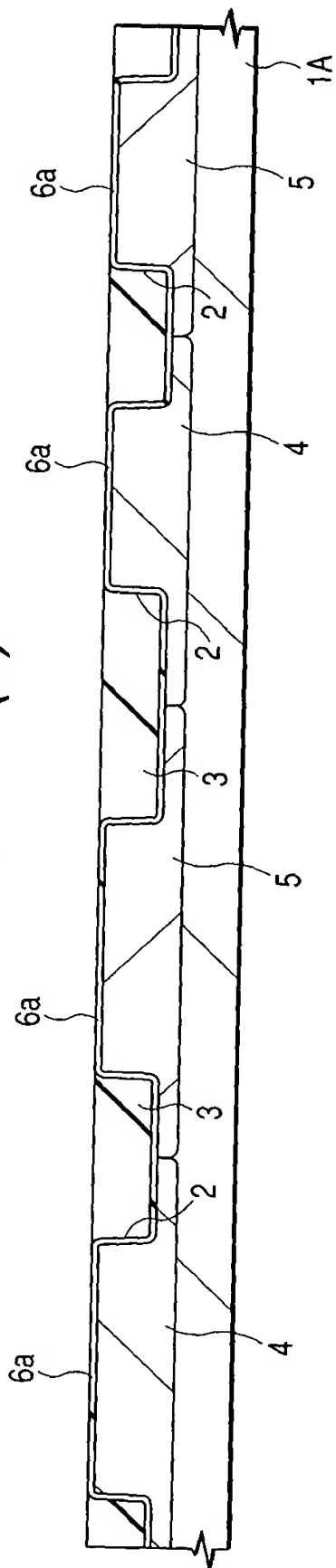
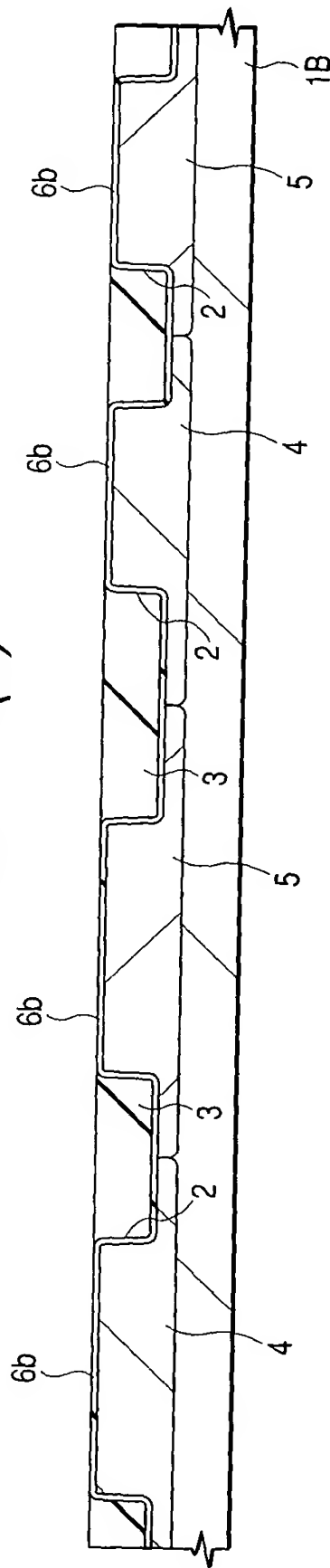


FIG. 11(b)



APPROVED	O.G. FIG.
BY	CLASS
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10 / 30

FIG. 12(a)

FIG. 12(a)

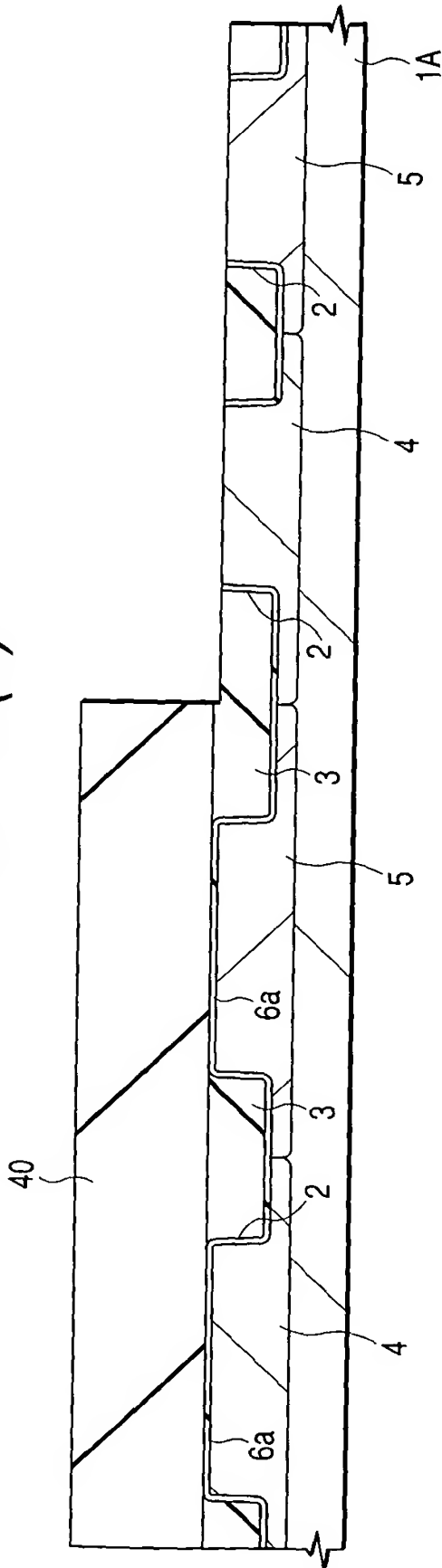
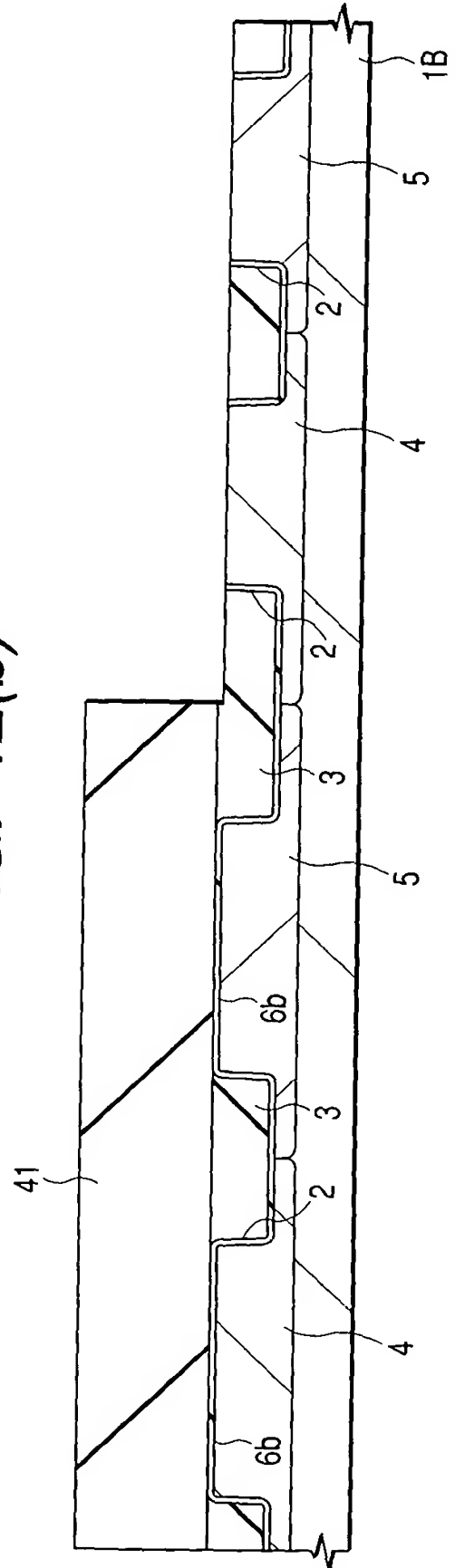


FIG. 12(b)



APPROVED	O.G. FIG.	
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11 / 30

FIG. 13(a)

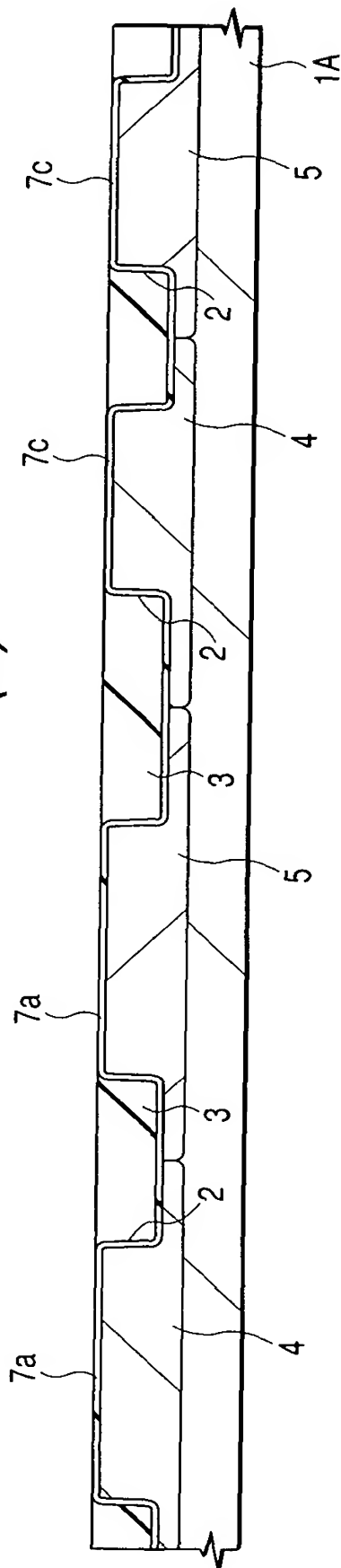


FIG. 13(b)

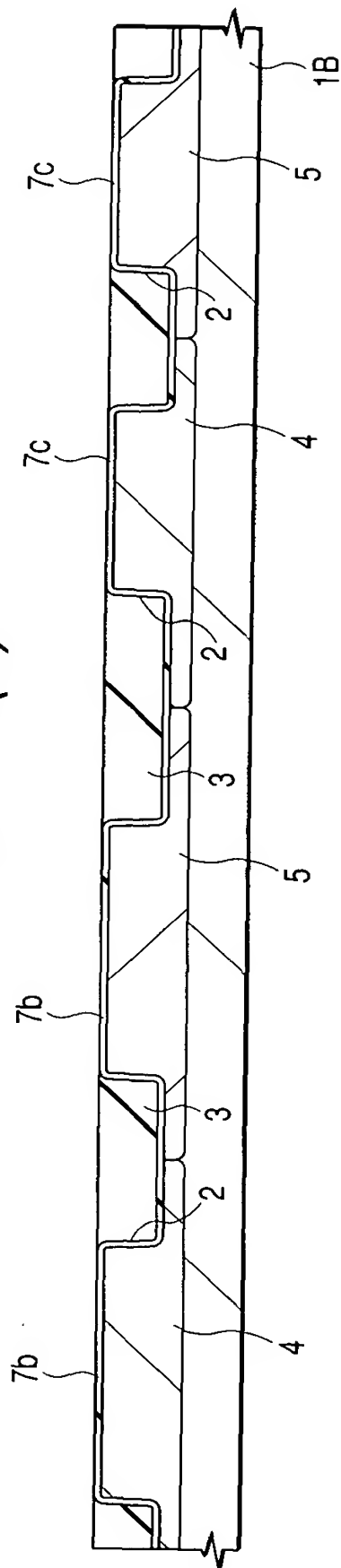


FIG. 14(a)

FIG. 14(a)

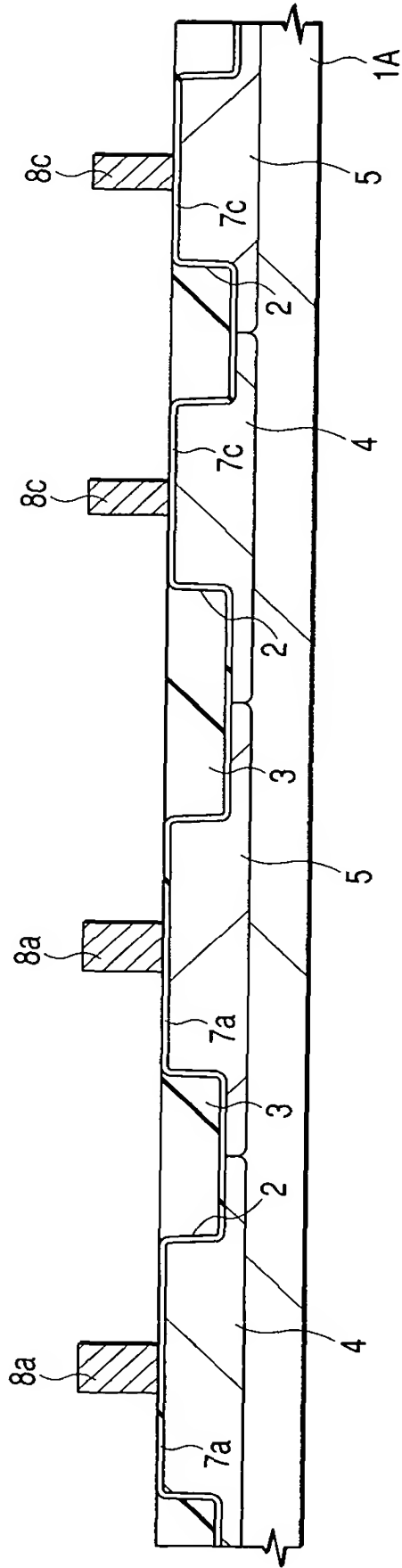


FIG. 14(b)

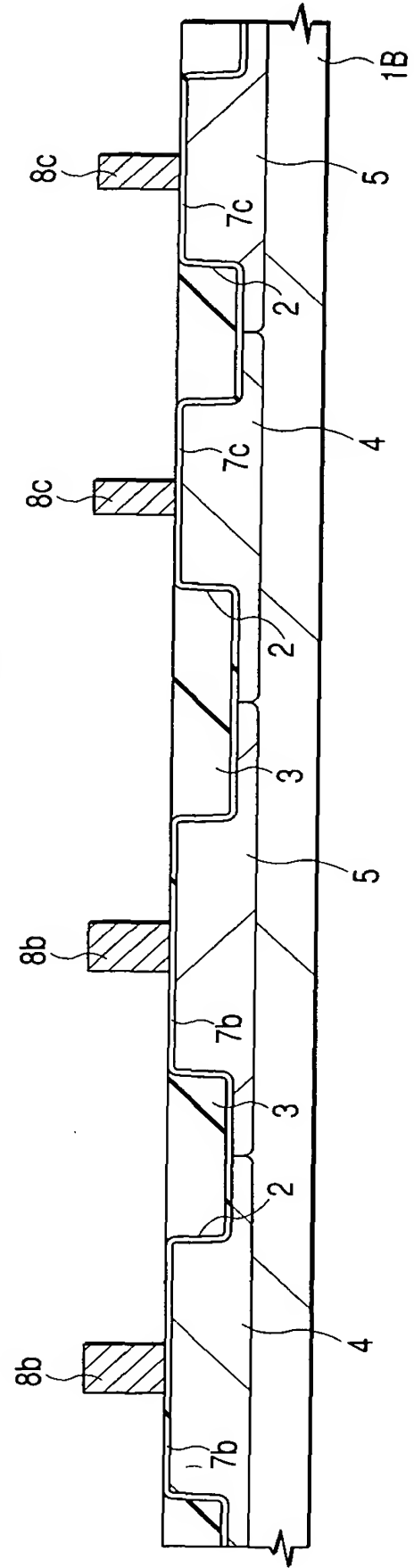


FIG. 15(a)

FIG. 15(a)

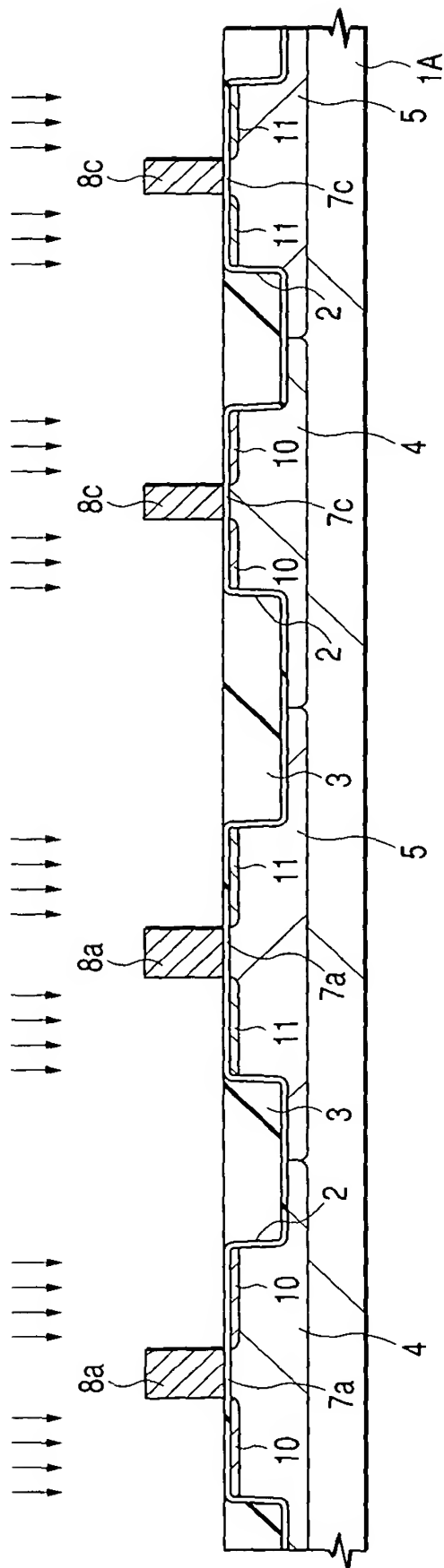
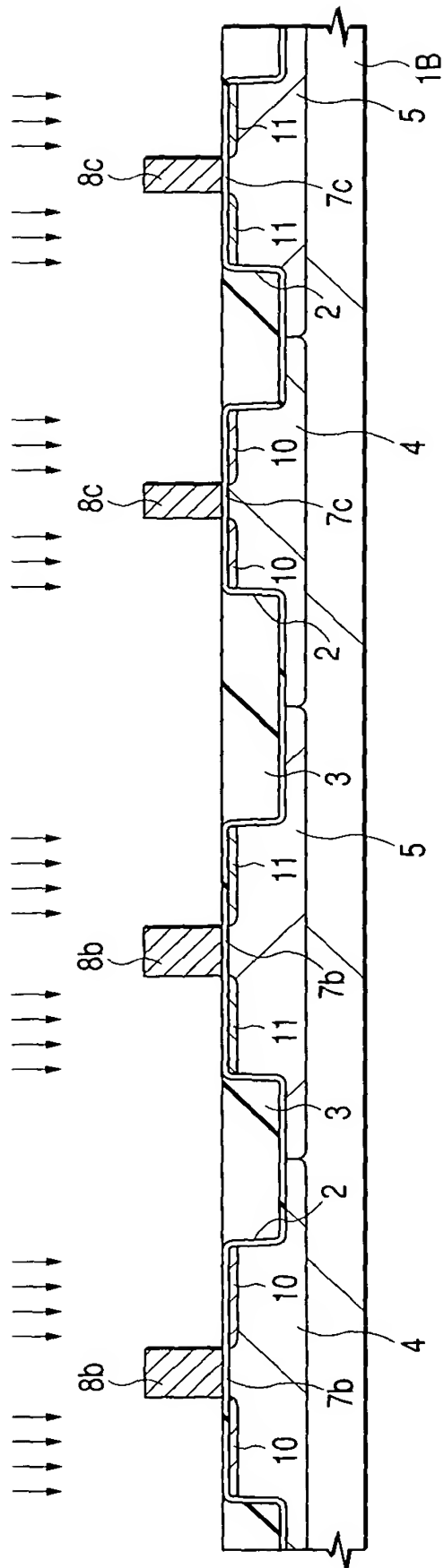


FIG. 15(b)



APPROVED	O.G. FIG.	
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14 / 30

FIG. 16(a)

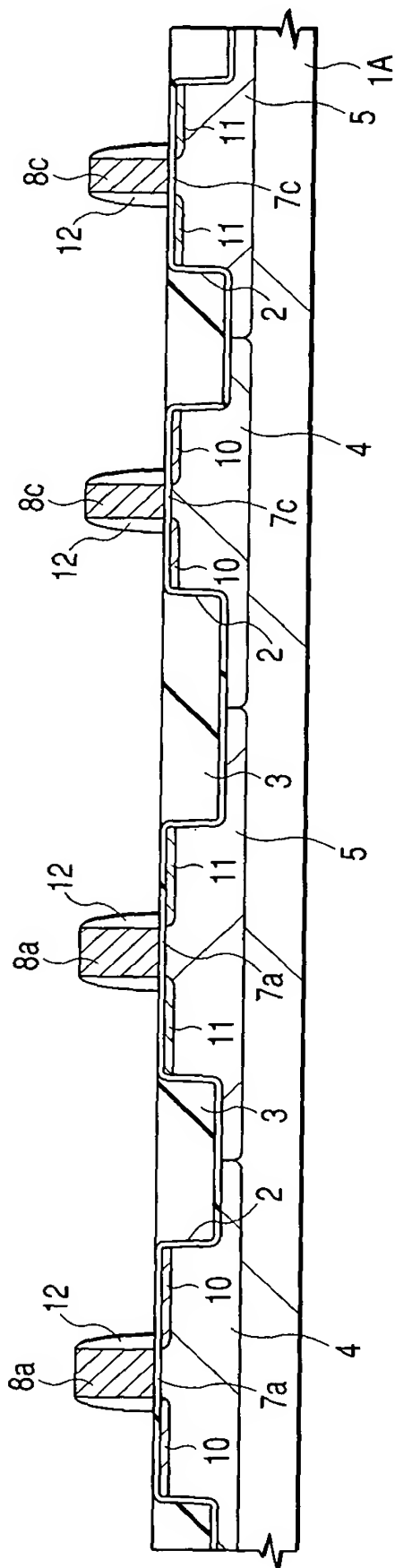
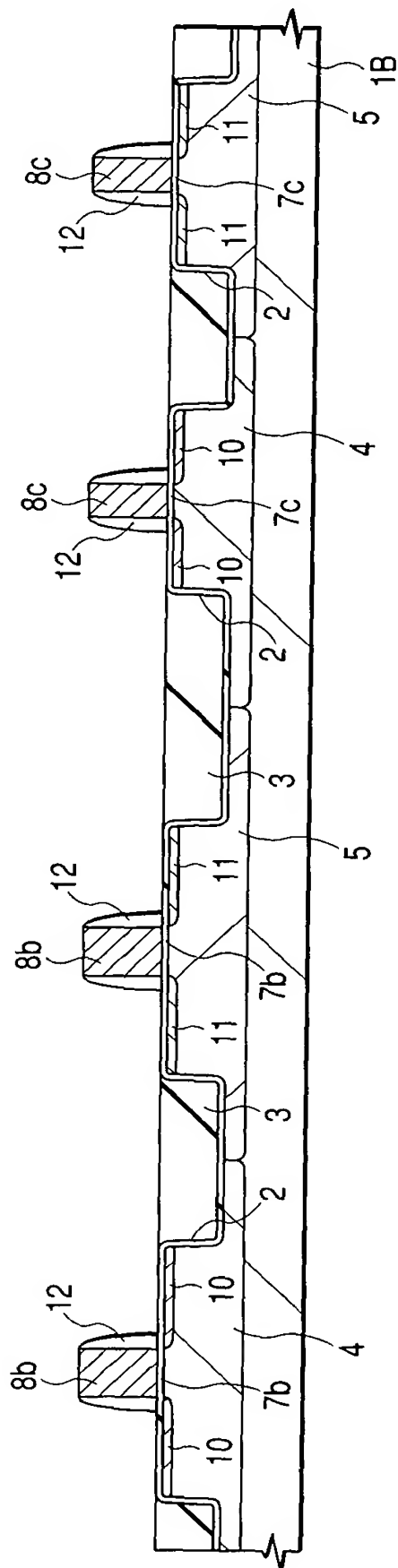


FIG. 16(b)





APPROVED	O.G. FIG.	
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16 / 30

FIG. 18(a)

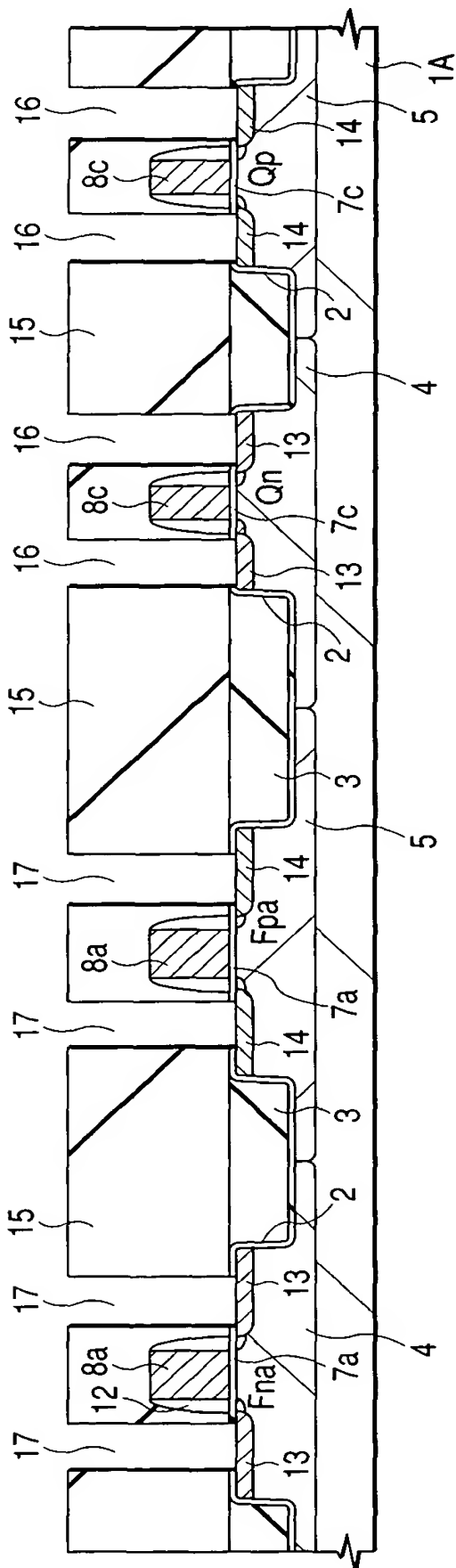


FIG. 18(b)

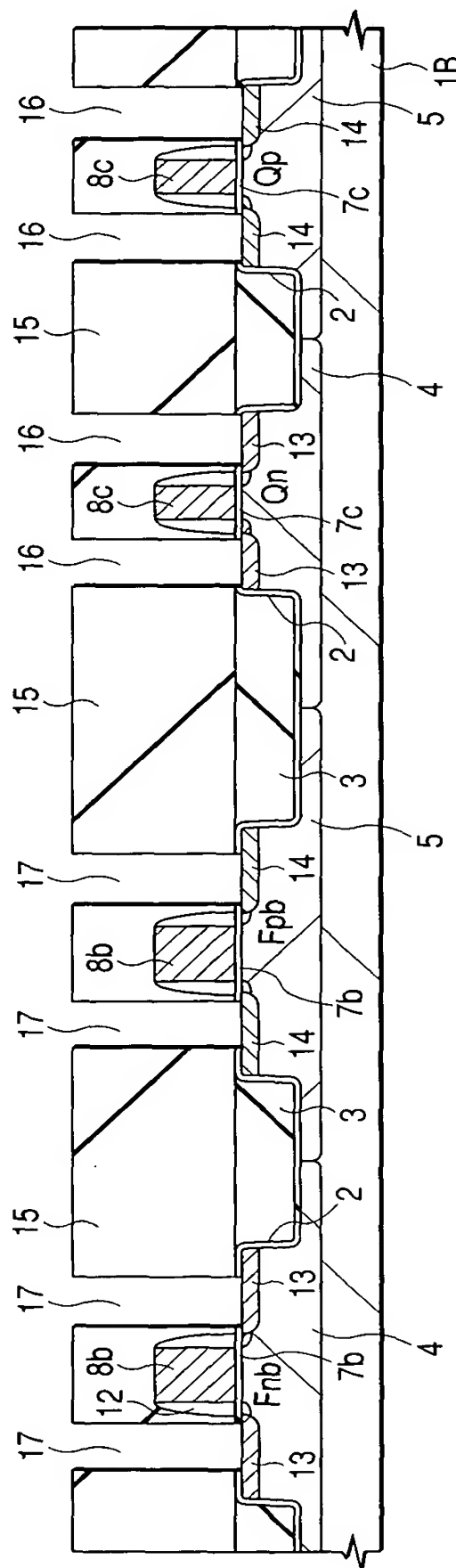
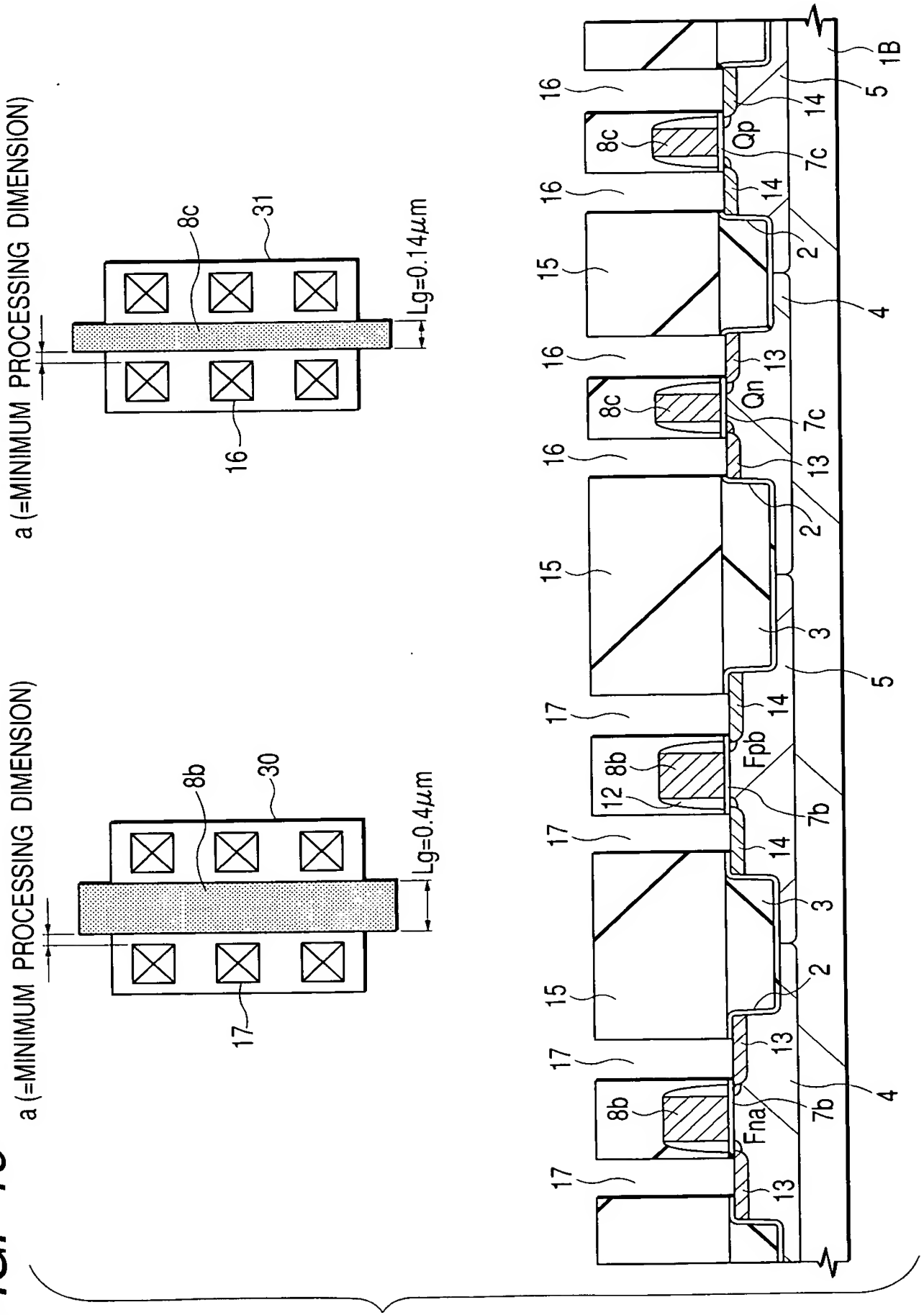




FIG. 19



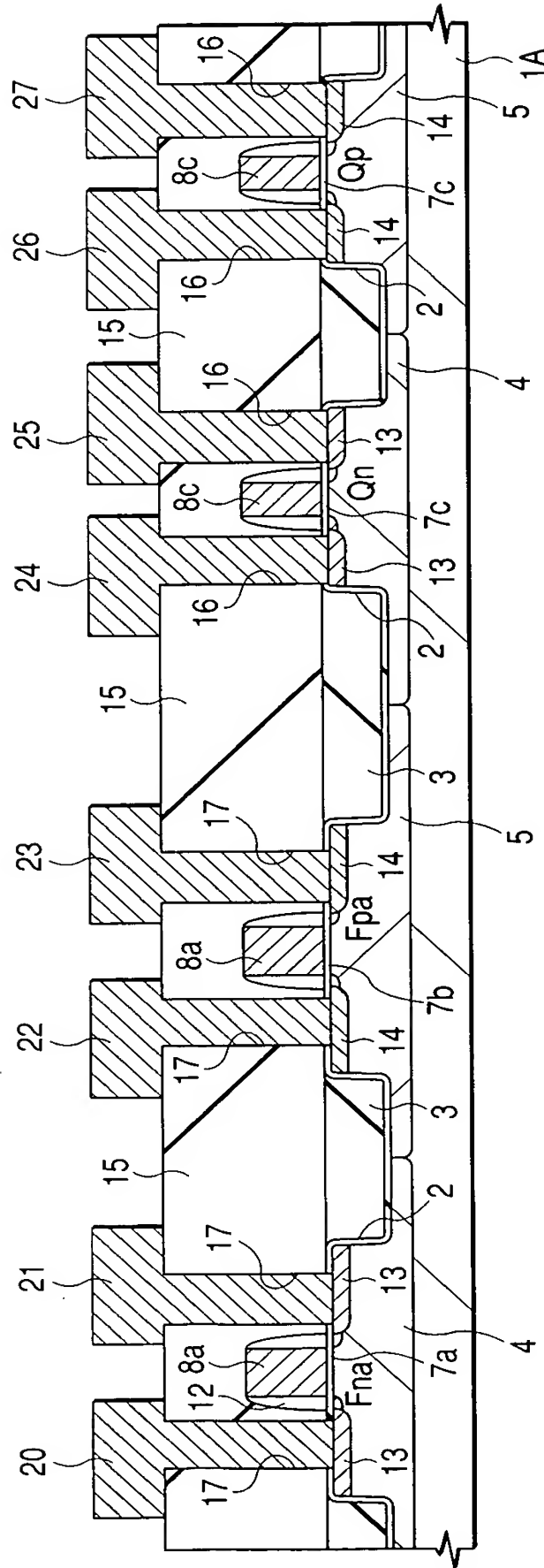


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19 / 30

FIG. 21

FIG. 21

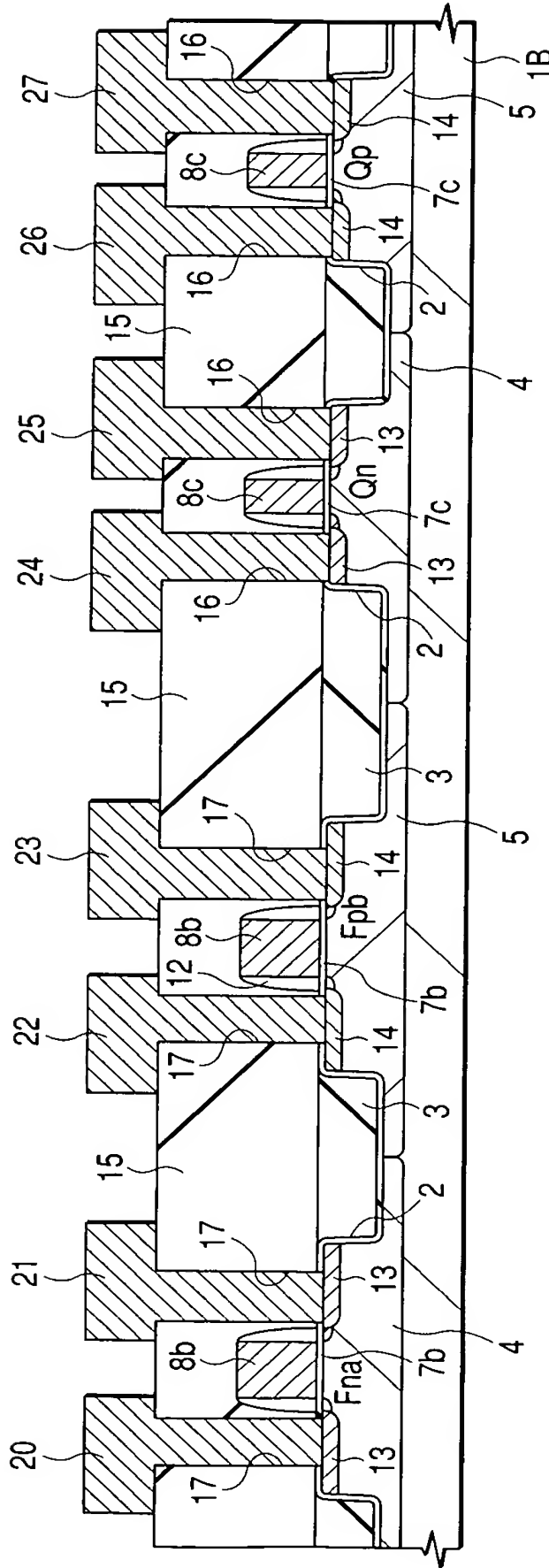


APPROVED	O.G. FIG.	
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20 / 30

FIG. 22

FIG. 22



*FIG. 23*

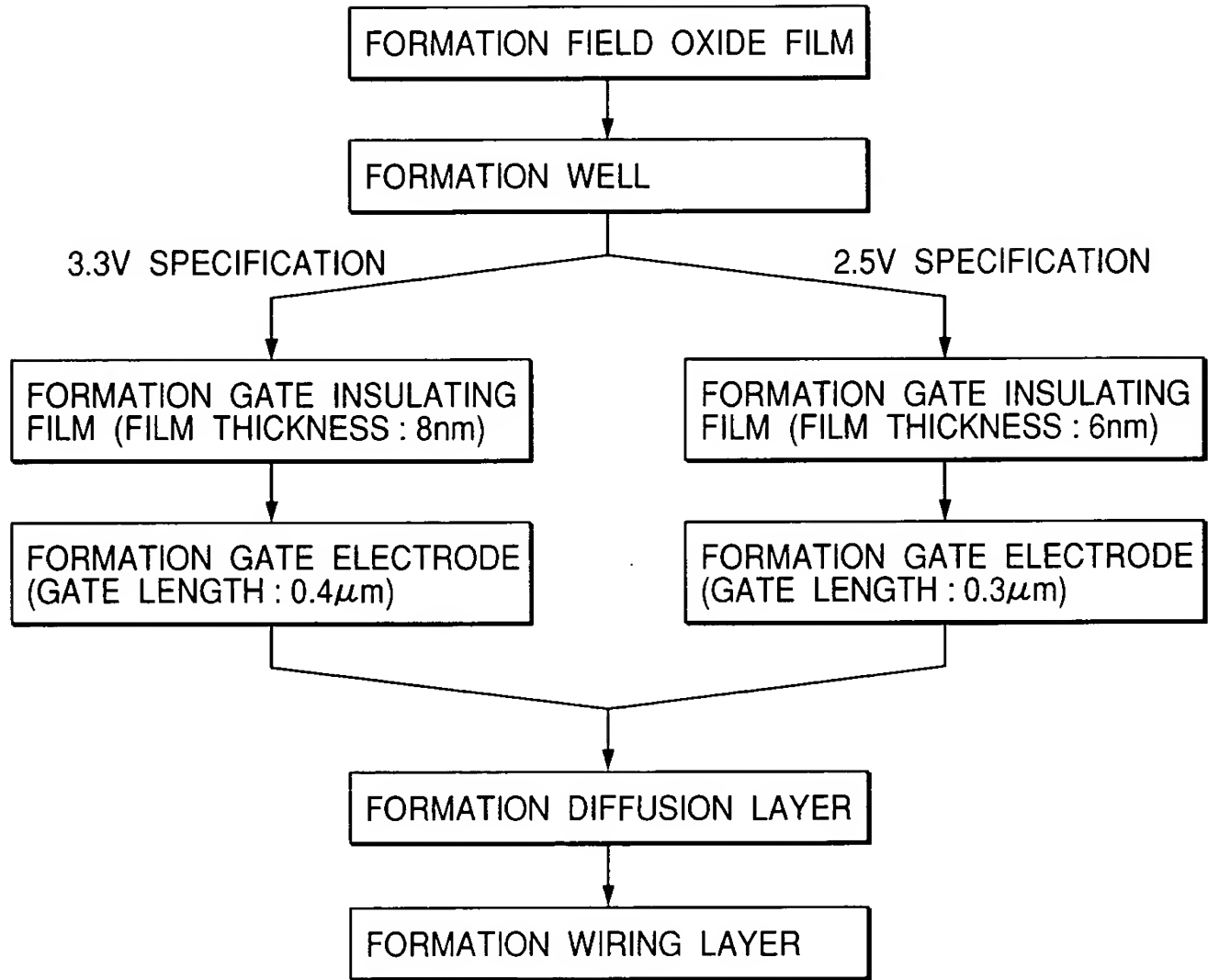
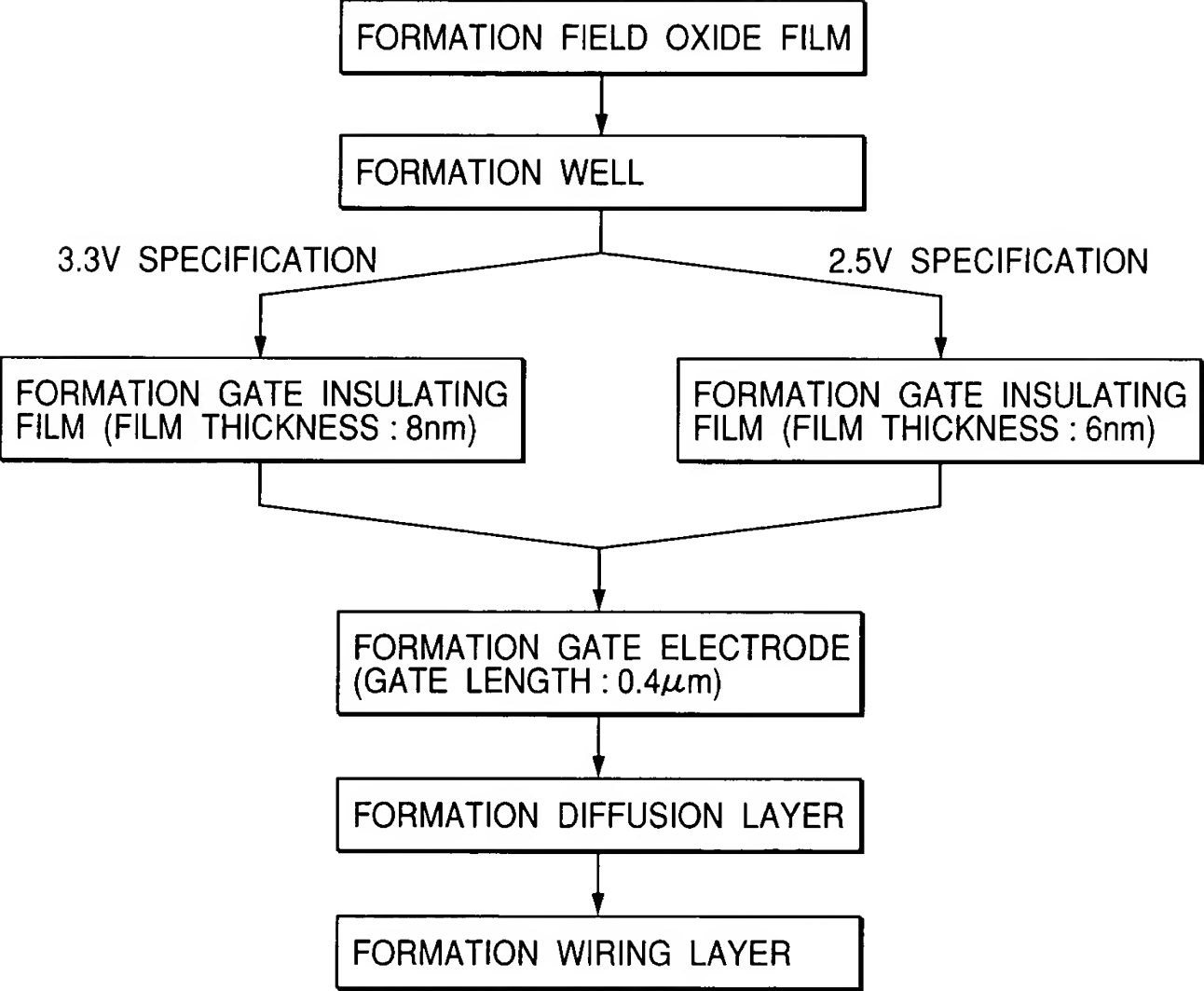


FIG. 24









APPROVED	O.G. FIG.	
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FIG. 27

SPECIFICATION	SUPPLY VOLTAGE	I/O SUPPLY VOLTAGE	INPUT SIGNAL LEVEL		SUPPLY VOLTAGE INTERNAL CIRCUIT
	VDD	VDDQ	VILmin	VIHmax	VDDI
3.3V SPECIFICATION	3.3V	3.3V	0V	VDDQ	1.5V
2.5V SPECIFICATION	2.5V	1.5V	0V	VDDQ	1.5V



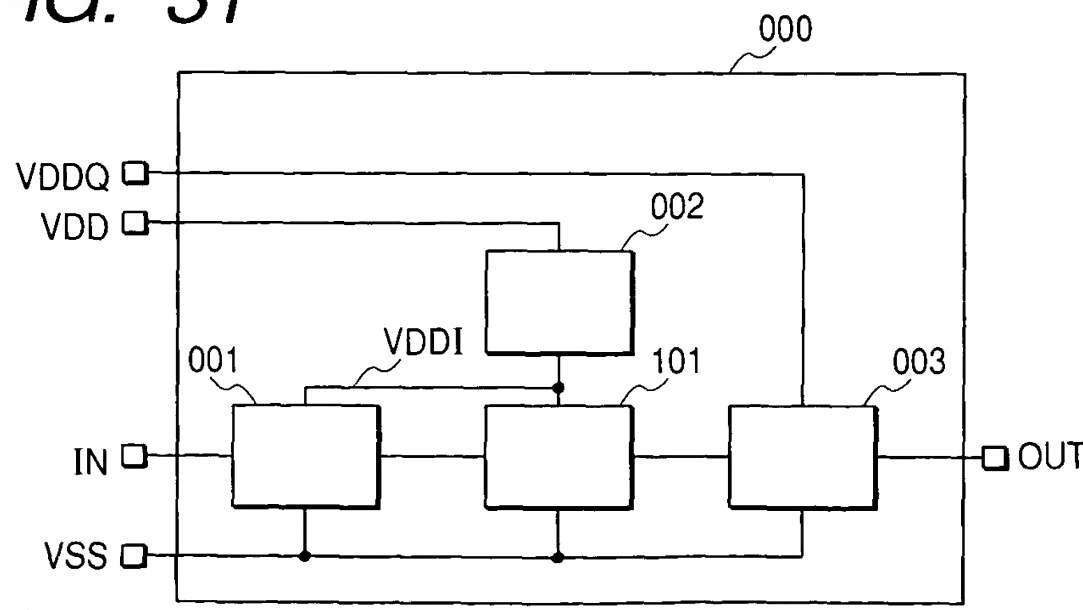
FIG. 29

SPECIFICATION	SUPPLY VOLTAGE	I/O SUPPLY VOLTAGE	INPUT SIGNAL LEVEL		SUPPLY VOLTAGE INTERNAL CIRCUIT
	VDD	VDDQ	VILmin	VIHmax	VDDI
3.3V SPECIFICATION	3.3V	3.3V	0V	VDDQ	1.5V
2.5V SPECIFICATION	2.5V	2.5V	0V	VDDQ	1.5V

FIG. 30

	GATE INSULATING FILM THICKNESS	MINIMUM PROCESSING GATE LENGTH
	TOX	Lg
3.3V WITHSTANDING MOS	8nm	0.4μm
2.5V WITHSTANDING MOS	6nm	0.3μm
1.5V WITHSTANDING MOS	3nm	0.14μm

FIG. 31

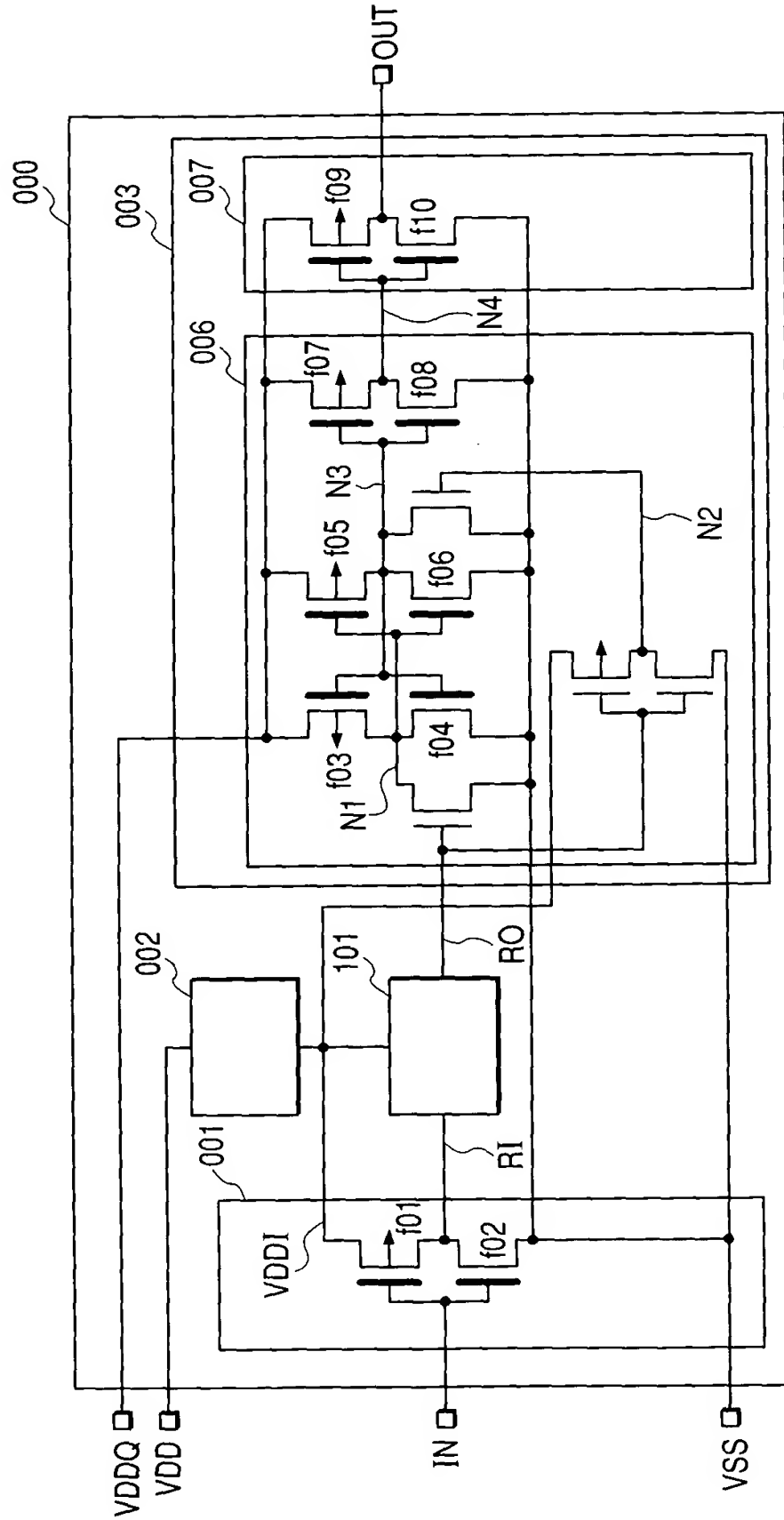


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28 / 30

FIG. 32

FIG. 32



APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
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29 / 30

*FIG. 33*

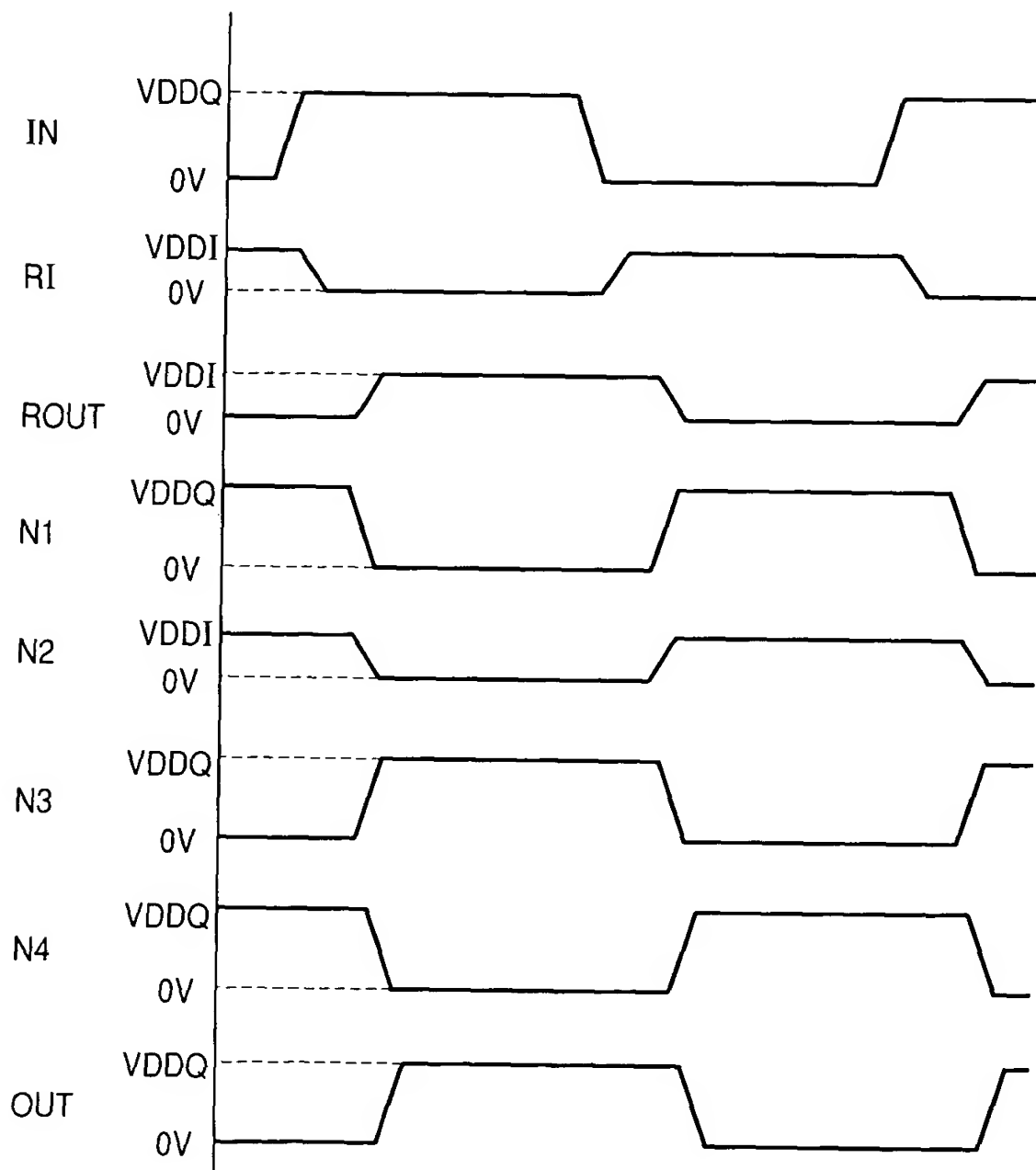


FIG. 33

FIG. 34

FIG. 34

